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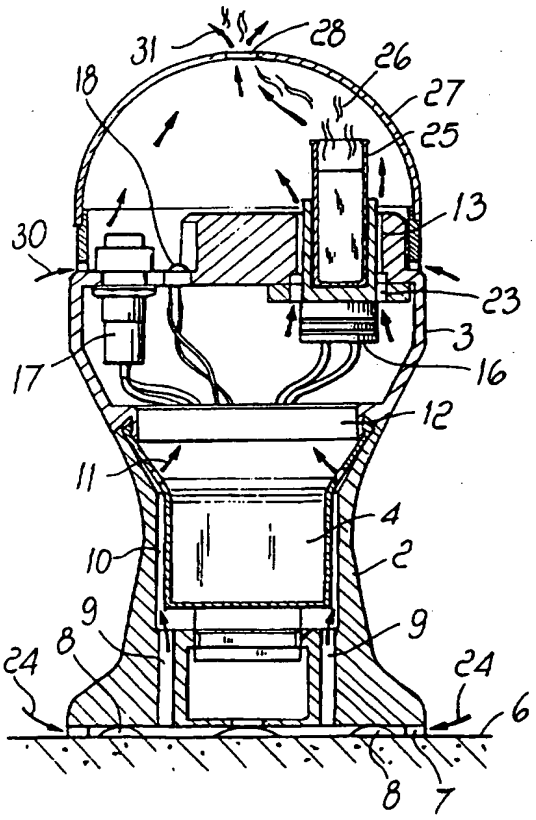
(54) Title: MULTIPLE ELECTRIC VAPORIZER FOR RESINS

(57) Abstract

A multiple electric vaporizer for vaporizing resins such as incense, propolis and myrrh, the vaporizer comprising a plurality of heated hollow bodies (13, 14, 15), inside which ampoules (25) containing the resins to be vaporized are partially inserted, each hollow body reaching different temperatures according to the type of resin to be vaporized, the heating action being conveniently controlled and timed.



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MULTIPLE ELECTRIC VAPORIZER FOR RESINS

Technical Field

The present invention relates to a multiple electric vaporizer for vaporizing resins such as incense, propolis and myrrh.

Background Art

Conventional vaporizers for insecticides or resins are adapted to heat impregnated tablets, liquid containers, or resins in various forms.

These electrically powered vaporizers are particularly simple, but indeed because of their simplicity they are not functional, since their temperature adjustment is very inaccurate.

Temperature is an important variable in achieving correct vaporization without causing carbonization of the product, which generates toxic compounds especially if the product is resin-based.

Resin-derived products or products having a resin-like consistency, such as incense, myrrh and propolis, conventionally have therapeutic characteristics which are enhanced when they are inhaled in vapor form and even more so if these vapors are produced by mixtures of products.

Disclosure of the Invention

A principal aim of the present invention is to provide a multiple electric vaporizer which allows to vaporize a plurality of products simultaneously.

Within the scope of this aim, an object of the present invention is to provide a multiple electric vaporizer in which it is possible to vaporize different products at different temperatures.

Another object of the present invention is to provide an electric vaporizer which is unexpensive and easy to use.

This aim, these objects and others which will become apparent hereinafter are achieved by a multiple electric vaporizer for resins, characterized in that it comprises a supporting structure for a plurality of electrically heated hollow bodies, each whereof is adapted to accommodate an ampoule containing a product to be vaporized, said structure containing electric and electronic power supply and control means, a perforated dome being located above the heating bodies and being adapted to protect them and mix the generated vapors, internal ventilation means being also provided.

Brief Description of the Drawings

Further characteristics and advantages of the present invention will become apparent from the following detailed description of a preferred embodiment thereof, given only by way of non-limitative example and illustrated in the accompanying drawings, wherein:

figure 1 is a perspective view of the electric vaporizer according to the present invention;

figure 2 is a top view of the electric vaporizer of figure 1;

figure 3 is a sectional view of the electric vaporizer;

figure 4 is a partial, sectional view of a different embodiment of said electric vaporizer.

Ways of carrying out the Invention

With reference to the above figures, the electric vaporizer according to the present invention is composed of a structure generally designated by the reference numeral 1

and composed of a footing 2 and a head 3, both being hollow and preferably produced by molding plastics.

A step-down transformer, not shown, is located inside the footing, in a box-like body 4, and is supplied from the mains by means of a power cord 5.

The lower part of the footing 2 is wider and is kept raised from the resting surface 6 by a cylindrical ring 7 having a plurality of arc-shaped openings 8.

Vertical channels 9 are provided inside footing 2 and lead into an annular chamber 10 which surrounds the box-like body 4 containing the transformer.

Chamber 10 is provided, in an upward region, with passages 11 leading into an upper part of the footing 2, where a second box-like body 12 is provided which contains electrical and electronic devices for control and operation.

The footing 2 is coupled to the head 3, with which three hollow heating bodies 13, 14 and 15 made of metal are associated.

An electric resistor 16 is provided in the lower part of each one of said heating bodies, for example the one designated by the reference numeral 13 in figure 3; the resistor can be activated by a switch 17, its operation being visualized by a luminous indicator 18.

Likewise, the hollow heating body 14 is controlled by a switch 19 provided with a visual indicator 20 and the hollow heating body 15 is controlled by a switch 21 provided with a visual indicator 22.

An annular chamber for the flow of air, designated by the reference numeral 23 for the body 13, is provided around each one of said hollow bodies 13, 14 and 15.

An identical chamber is also provided around the hollow bodies 14 and 15.

All the above referenced ducts and chambers allow ambient air to enter from below, in the direction indicated by the arrows 24, and to rise through the various ducts and the various chambers, cooling the transformer and then flowing over the outer part of each hollow body in the direction indicated by the arrows shown in figure 3.

An ampoule 25 containing the resin to be vaporized is inserted in each hollow body.

Heating of the respective hollow body by means of the resistor, for example 16, causes a production of vapors 26 which first gather beneath a protective dome 27 and then flow outside through an upper hole 28.

The dome 27 is preferably made of transparent plastics and has at its lower edge, where it makes contact with the head 3, a plurality of openings 29 which allow air to enter in the direction shown by the arrow 30, the air mixing with the vapors and also flowing out of the hole 28 in the direction shown by the arrows 31.

The resistors of the three hollow heating bodies are controlled so that the temperature reaches a preset value and then remains constant.

The three hollow bodies have different operating temperatures which can in any case be preset or adjusted, depending on the resin to be vaporized.

More particularly, the electric vaporizer according to the present invention is conveniently used to vaporize propolis, incense and myrrh separately or together.

For these products, the operating temperatures are

between 90° and 110° for the hollow body meant to vaporize propolis, between 90° and 120° for the hollow body meant to vaporize incense, and between 90° and 130° for the hollow body meant to vaporize myrrh.

Temperature adjustment allows to obtain a vapor mixture which is blended at pleasure.

The electronic control system is also conveniently provided with a timer system, so as to allow to preset the vaporization periods.

In order to increase the introduction of the vapors into the environment, it can be convenient to install, as shown in figure 4 in the lowermost part of the footing 2, a fan 32 which causes forced air suction in the direction shown by the arrow 33 and sends it, again with a forced action, through the channels and the circulation chambers which have already been described.

The description of the embodiment clearly shows that the electric vaporizer according to the present invention allows to simultaneously vaporize three different products at different temperatures and, if one wishes, for different times.

It is thus possible to introduce into an enclosed space a chosen amount of products, so as to utilize their therapeutic characteristics in an optimum manner.

The electric vaporizer is very simple to use and is protected in its hot parts, so that it is not dangerous.

Obviously, the components used and the shapes of the structure may be different although starting from the same inventive concept.

CLAIMS

1. A multiple electric vaporizer for resins, characterized in that it comprises a supporting structure for a plurality of electrically heated hollow bodies, each whereof is adapted to accommodate an ampoule containing a product to be vaporized, said structure containing electric and electronic power supply and control means, a perforated dome being located above the heating bodies and being adapted to protect them and mix the generated vapors.

2. A multiple electric vaporizer according to claim 1, characterized in that said supporting structure is constituted by a footing and by a head, both being hollow.

3. An electric vaporizer according to claim 2, characterized in that a step-down transformer is contained in said footing, in a chamber which is externally ventilated by air streams arriving from the lower part of the footing, which is raised and has a plurality of external accesses.

4. An electric vaporizer according to claim 3, characterized in that it comprises a fan contained in said footing.

5. An electric vaporizer according to claim 1, characterized in that said hollow bodies are metallic, with cylindrical cavities having a vertical axis, and are heated in a downward region by a resistor which can be activated by means of a switch and is equipped with a thermostat.

6. An electric vaporizer according to claim 1, characterized in that said hollow bodies are fixed to the head of said structure so as to leave a perimetric opening which allows said ventilation air to flow over them

externally, producing a rising flow which mixes the released vapors.

7. An electric vaporizer according to claim 1, characterized in that said head is closed by a detachable dome for protecting and mixing the vapors, and is provided with lower openings for the inflow of air and with upper holes for the exit of the vapors.

8. An electric vaporizer according to claim 1, characterized in that timer means for adjusting the activation and deactivation of the heating resistors are provided.

9. An electric vaporizer according to claim 1, characterized in that the temperatures in the three heating bodies are respectively between 90° and 110° Celsius for vaporizing propolis, between 90° and 120° Celsius for vaporizing incense, and between 90° and 130° Celsius for vaporizing myrrh.

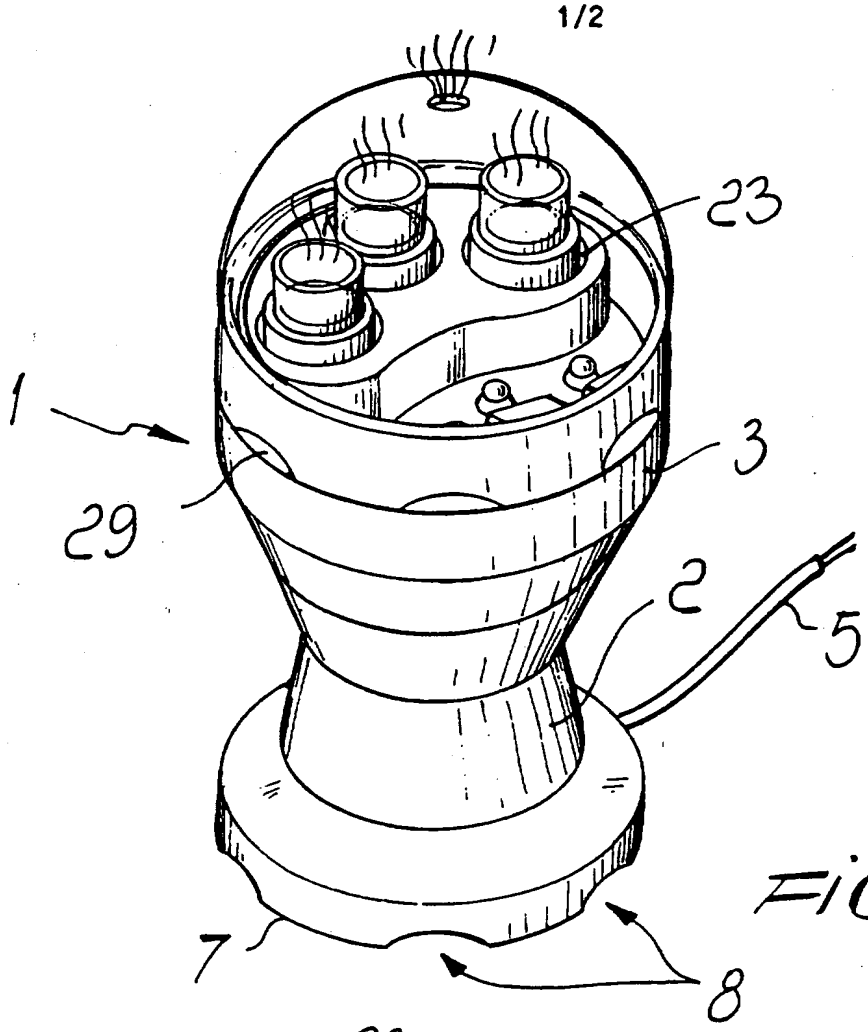

Fig. 1

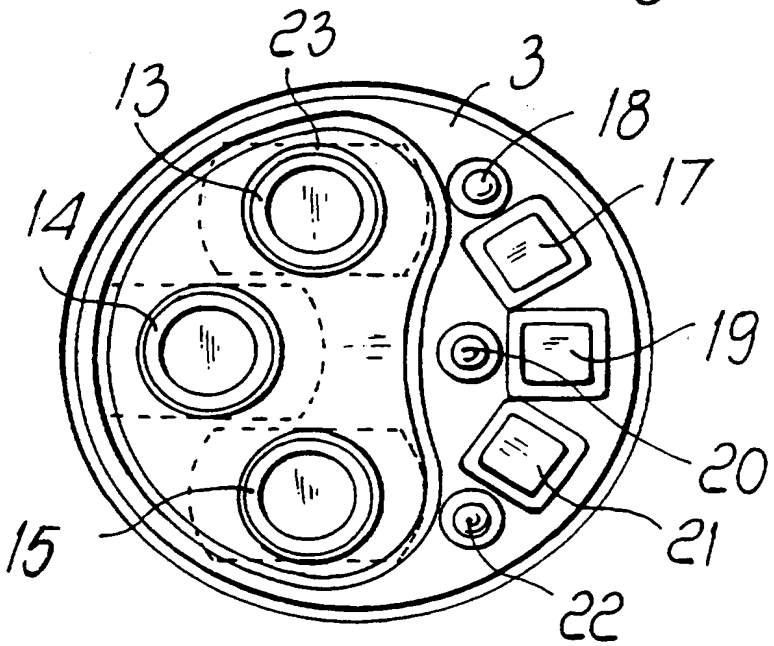

Fig. 2

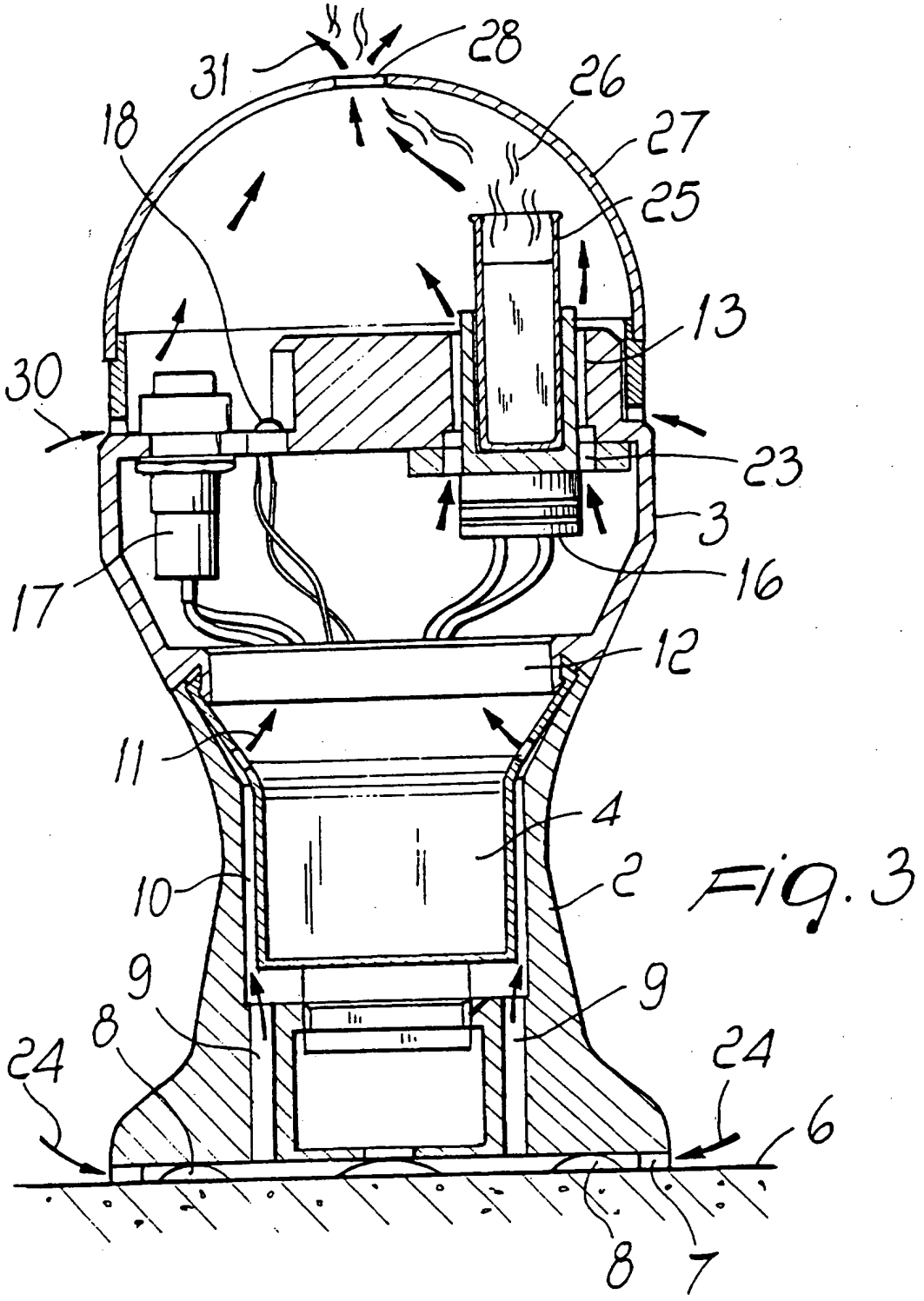

FIG. 3

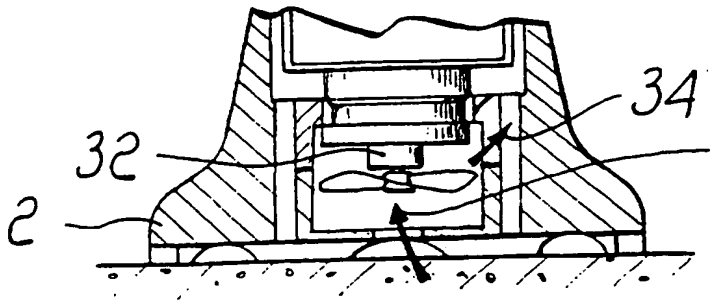

FIG. 4

INTERNATIONAL SEARCH REPORT

Inter nal Application No
PCT/EP 97/01897

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61L9/03

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 A61L A01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 062 199 A (AIR FRESH UK LTD) 20 May 1981 see claims; figures	1-9
A	FR 2 510 410 A (ALKEKENGE SARL) 4 February 1983 see claims	1-9
A	FR 2 380 002 A (GUDEL WALTER) 8 September 1978 see claims; figures	1
A	US 5 178 839 A (SPECTOR DONALD) 12 January 1993	
A	FR 2 614 535 A (SCP FACT-ANAL.) 4 November 1988	

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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A	WO 90 03192 A (JOST DIDIER GEORGES) 5 April 1990	

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information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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